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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,302	11/19/2001	Qiang Yu	205355X3404	7405

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 07/08/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,302

Applicant(s)

YU ET AL.

Examiner

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 and 33-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 14-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-36 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2-3</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-13, drawn to aqueous composition, classified in class 106, subclass 287.29.
 - II. Claims 14-32, drawn to method of treating a set gypsum-containing material, classified in class 524, subclass 417.
 - III. Claims 33-35, drawn to method of making a set-gypsum-containing material, classified in class 524, subclass 423.
 - IV. Claim 36, drawn to set gypsum-containing material, classified in class 428, subclass 703.
2. The inventions are distinct, each from the other because:
 - (a) Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the process for using the product as claimed can be practiced with another materially different product such as non-aqueous composition or aqueous composition comprising no phosphate salts. Further, the product as claimed can be used in

materially different process of using that product such as method of treating paper, i.e. as an ink, or method of making a set-gypsum material, i.e. by mixing phosphate salt, water, and gypsum.

(b) Inventions I and IV are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as an ink or paint and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

(c) Inventions II and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another materially different process such as only adding phosphate salt to the set gypsum matrix but not when forming the set gypsum

matrix, only adding phosphate salt when forming the set gypsum matrix but not after, or not adding phosphate salt at all.

(d) Inventions I and III, II and III, and III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, inventions I and III have different functions and effects given that invention I is an aqueous composition which functions a coating with the effect of producing a coated substrate while invention III is a process which functions by mixing water, gypsum, and phosphate salts with the effect of producing a set gypsum containing material. Inventions II and III have different functions and effects given that invention III is drawn to a method of making a set gypsum-containing material by mixing various ingredients while invention II is drawn to a method of treating the set gypsum-containing material (formed by method of invention III) by coating the material with aqueous composition. Inventions III and IV have different functions and effects given that invention III is a process which functions by mixing water, gypsum, and phosphate salts with the effect of producing a set gypsum containing material while invention IV is the set gypsum-containing material which functions as a substrate with the effect of accepting coating to produce coated material.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and/or their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Salim Hasan on 6/27/03 a provisional election was made with traverse to prosecute the invention of Group II, claims 14-32. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-13 and 33-36 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 14-31 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/06518.

WO 00/06518 discloses method of coating set gypsum-containing material comprising applying to the material composition formed from water, binder including latex and polyvinyl acetate, filler, and at least one or more enhancing materials such as sodium trimetaphosphate,

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sodium hexametaphosphate having 6-27 repeating phosphate units, ammonium polyphosphate having 1000-3000 repeating phosphate units, and sodium or potassium phosphate. The composition is added to the gypsum-containing material by spraying. The enhancing material is added in order to improve the strength of the treated gypsum-containing material (page 1, lines 6-13 and 20-22, page 5, lines 26-28, page 10, lines 20-29, page 11, lines 16-25, page 12, lines 23-25, page 15, lines 22-28, page 16, lines 2-6, page 16, line 26-page 17, line 2, page 17, lines 5-10 and 14-17, page 8, line 4, page 23, lines 3-16, examples 9 and 12, and Table 16).

In light of the above, it is clear that WO 00/06518 anticipates the present claims.

8. Claims 14-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Veeramasuneni et al. (U.S. 6,409,824).

Veeramasuneni et al. disclose method of coating set gypsum-containing material comprising applying to the material composition formed from water, latex binder, reinforcing additive, i.e. filler, and at least one or more enhancing materials such as sodium trimetaphosphate, sodium hexametaphosphate having 6-27 repeating phosphate units, ammonium polyphosphate having 1000-3000 repeating phosphate units, and sodium or potassium phosphate. The composition is added to the gypsum-containing material by spraying (col.1, lines 13-15, col.2, lines 65-67, col.4, lines 25-28, col.5, lines 12-15, col.6, lines 17-20, col.9, lines 26-64, col.10, lines 34-355, and col.19, lines 1-2). Although there is no disclosure that the enhancing material improves the strength, hardness, abrasion resistance or erosion resistance of the treated set gypsum-containing material, given that Veeramasuneni et al. disclose the use of phosphate salts in an amount of 0.004-2%, which overlaps the amount of phosphate

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salts used in the present invention, it is clear that the use of the phosphate salts would inherently improve the strength, hardness, abrasion resistance and erosion resistance of the set gypsum-containing material.

In light of the above, it is clear that Veeramasuneni et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/06518 or Veeramasuneni et al. (U.S. 6,409,824) either of which in view of Hashimoto et al. (U.S. 4,174,230).

The disclosures with respect to WO 00/06518 and Veeramasuneni et al. in paragraphs 7 and 8 above are incorporated here by reference.

The difference between either WO 00/06518 or Veeramasuneni et al. and the present claimed invention is the requirement in the claims of specific type of filler.

Both WO 00/06518 and Veeramasuneni et al. disclose the use of filler in the making the set gypsum-containing material, however, neither explicitly discloses specific types of filler.

Hashimoto et al., which is drawn to gypsum containing composition, disclose the use of filler such as calcium hydroxide, i.e. hydrated lime, in order to reinforce gypsum-containing material (col.3, lines 26-28 and 39-43).

In light of the motivation for using specific filler disclosed by Hashimoto et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such filler as the filler in either WO 00/06518 or Veeramasuneni et al., and thereby arrive at the claimed invention.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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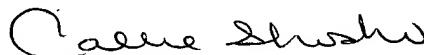
Turpin et al. (U.S. 6,182,407) disclose solution for treating gypsum board wherein the solution comprises latex and sodium hexametaphosphate.

Sano et al. (U.S. 3,977,888) disclose coating composition for gypsum board which comprises ammonium phosphate.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
July 2, 2003